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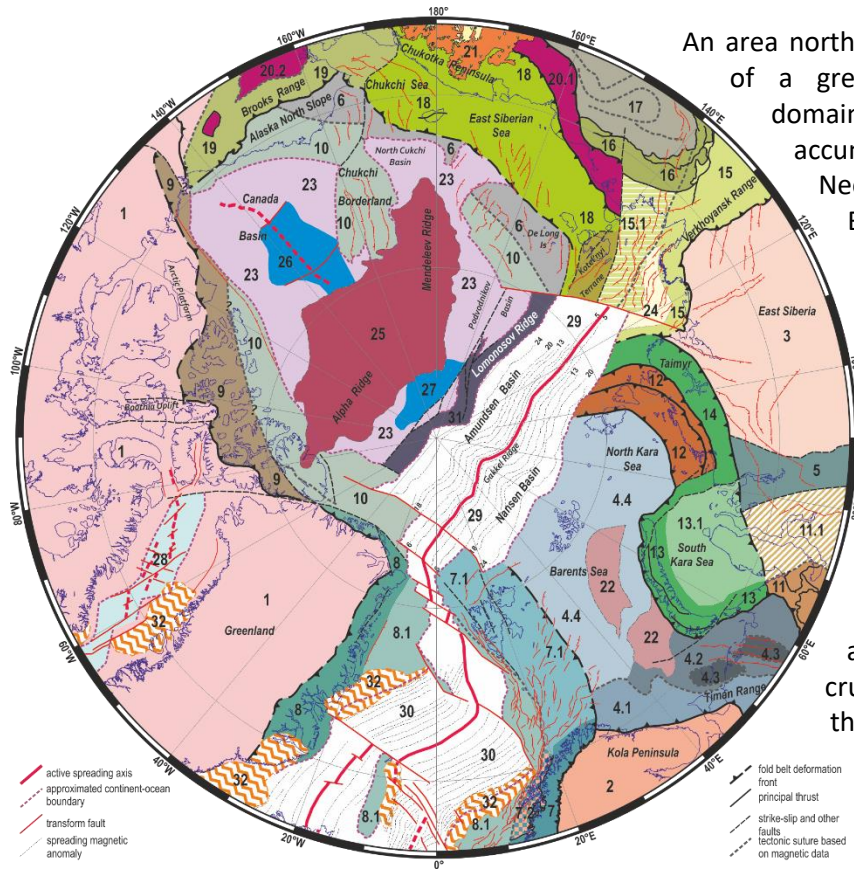
## New tectonic map of the Arctic

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An area north of the Arctic Circle is composed of a great variety of tectonic crustal domains and overlying sedimentary accumulations ranging from the pre-Neoproterozoic North America, Baltica and Siberia cratons, to Cretaceous and Cenozoic oceanic basins. In addition, there are a series of Neoproterozoic and Phanerozoic fold belts extending onto the Arctic shelves and forming their tectonic basement.

Our new tectonic map of the Arctic provides a summary of the current state-of-knowledge associated with Arctic crust, crustal-scale discontinuities and their ages, as well as the characteristics of the lithosphere as a whole using available published geological and geophysical data (Fig. 1).

Figure 1: Tectonic map of the Arctic.

1-3, cratons: 1, North American, 2, East Siberian, 3, Baltica; 4-20, fold belts (FB): 4, Neoproterozoic Timanian FB (4.1, Timan Domain, 4.2, Bol'shezemel'sk domain, 4.3, inferred massifs; 4.4, inferred offshore), 5, Neoproterozoic Yenisei FB inferred under W. Siberian Basin, 6, Neoproterozoic Bennett-Borrovia-Arctic Alaska Block, 7, Scandinavian Caledonides (7.1, inferred offshore; 7.2, Baltican parautochthon), 8, East Greenland Caledonides (8.1, inferred offshore), 9, Ellesmerian FB; 10, undefined Caledonian-Ellesmerian FBs inferred offshore, 11, Late Pz Uralian FB (11.1, inferred under W. Siberian Basin), 12, Early Carboniferous North Taimyr FB, 13, Early Mz Pai-Khoi - Novaya Zemlya FB (13.1, inferred under South Kara Basin), 14, Early Mz South Taimyr FB, 15, Late Mz North Verkhoyansk FB (15.1, inferred offshore), 16, Late Mz Cherskii FB, 17, Kolyma-Omolon Superterrane, 18, Late Mz New Siberian-Chukotka FB, 19, Late Mz Brooks Range FB, 20, accreted oceanic and island-arc terranes (20.1, South Anyui Suture Zone & Oloi-Svyatoi-Nos magmatic arc, 20.2, Angayucham and Koyukuk terranes); 21, Late Cretaceous Okhotsk-Chukotka Volcanic Belt; 22-24, hyperextended crust and/or exhumed mantle: 22, East Barents

*basins, 23, Amerasia Basin margins, 24, Ust' Lena Rift; 25, Alpha-Mendelev LIP; 26-30, spreading basins: 26, Canada, 27, Makarov, 28, Baffin Bay, 29, Eurasian, 30, Norwegian-Greenland; 31, Lomonosov Ridge Microcontinent; 32, volcanic continental margins.*

